

## REMARKS

The Examiner is thanked for the careful examination of the application. However, in view of the remarks that follow, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejections.

It is axiomatic that an Examiner cannot simply use the claims as a shopping list of elements and then peruse the prior art to find the individual elements. In the present case, the Examiner's rejection of the claims is based on hindsight where the claims were simply used as a mosaic or a shopping list of elements to be found in the prior art. This approach has been condemned by the Federal Circuit in *W. L. Gore and Associates v. Garlock*, 721 F.2d 1540 (Fed. Cir. 1983).

The result is that the claims were used as a frame, and individual, naked parts of separate prior art references were employed as a mosaic to create a facsimile of the claimed invention.

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To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of the hindsight syndrome wherein that which only the inventor taught is used against the teacher. It is difficult but necessary that the decision maker forget what he or she has been taught at trial about the claimed invention and cast the mind back to the time the invention was made (often as here many years), to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then accepted wisdom in the art.

Totally absent here is any indication in the prior art suggesting the combination defined by the claims. The individual elements may have been well known. But the elements were not combined in the manner described in the claims of the application, nor is there anything in the prior art itself which would even remotely suggest or teach the combination. The reason the combination does not exist in the prior art, of course, is that no one in the prior art appreciated the

substantial benefits that could be achieved by the specific combination defined by this invention.

The relationship between the combined references, and the alleged motivation to combine them is *tenuous* at best.

In the present Office Action, claims 1-29 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,043,014, hereinafter Loechl, in view of U.S. Patent No. 2,770,216, hereinafter Schock, and further in view of U.S. Patent No. 4,995,333, hereinafter Keller, and U.S. Patent No. 4,386,112, hereinafter Eaton.

The Examiner alleges that Loechl discloses a conveyor for moving gypsum boards, spray arms, a base frame, a plurality of spray nozzles and a pump system. The Examiner acknowledges that Loechl does not disclose (1) spraying arms with a pivot mounting to pivot from operative positions, (2) that the plurality of nozzles are arranged in clusters, and (3) that at least some of the nozzles in each cluster are at different distances from the spray arm.

The Examiner relies upon Schock to disclose pivot arms for spray heads and argues that it would have been obvious to one with ordinary skill in the art to include pivot arms for spray heads on Loechl because Schock teaches uniformity as desirable in the spraying art. However, contrary to the Examiner's allegations, Schock actually teaches away from the present invention and Loechl. See column 1, lines 24 – 30 of Schock, wherein he states "**...it has been found that a single traversing nozzle is preferable to a bank of fixed nozzles because of the difficulty in maintaining absolute uniformity in a bank of individual nozzles...**" Accordingly, if as the Examiner alleges, one skilled in the art was relying on Schock

to achieve uniformity in the spraying art, one would clearly have been directed to use a single nozzle, not a bank of nozzles as it taught by Loechl, and is used in the present invention. Accordingly, the combination of Loechl and Schock is improper, and if anything teaches away from a bank of nozzles.

The Examiner relies on Keller for an alleged teaching that the plurality of nozzles are arranged in clusters. Keller pertains to an apparatus for forming a continuous filament of a thermoplastic work material and for imparting a swirling motion thereto. The apparatus comprises a supply means such as a nozzle assembly 10. This nozzle assembly comprises a plurality of nozzles 24. The arrangement of nozzles 24 is displayed in Figs. 2, 3 and 11. The nozzles are arranged in two banks 20 and 22, i.e., two rows of nozzles, the rows being at a distance 23 from each other (see Fig. 2 and column 6, lines 24 - 28). In the preferred embodiment, *all nozzles in each bank are spaced apart by the same distance 88* (see Fig. 2), although Keller does state that, if desired, the individual nozzle units within a nozzle bank may be unequally spaced, column 6, lines 45 - 50. However, Keller does not provide any such unequally spaced examples, nor does Keller provide a reason as to why one would want to have the nozzles unequally spaced.

In other words, within the illustrated embodiments of Keller, in each row of nozzles, the arrangement is the same regular arrangement as the one in the spray arm of Loechl. Consequently Keller, just like Loechl, does not disclose *clusters* of nozzles. It is recalled here that *clusters* have in the present application their usual meaning of *groups*. The fact that the nozzles are arranged in clusters thus implies that some distances between some adjacent nozzles are greater than other

distances between other adjacent nozzles (see Fig. 4A and 5 of the present application). In both Loechl and Keller, all nozzles are evenly spaced out (see Figs. 2 and 11 in Keller).

The Examiner also contends that "*Keller et al. discloses the plurality of nozzles arranged in clusters, each cluster staggered*". However, although the word "*staggering*" is present in Keller (col. 6, line 36), Keller staggers the two *banks* 20, 22 of nozzles. Keller does not teach staggering the "so that at least some of the nozzles in each cluster are at different distances from the spray arm with respect to each other" as set forth in claim 1. In Keller, just like in Loechl, all nozzles are at the same distance from the support. This is evidenced by the whole specification as well as by Fig. 3, which is a side elevational view of the nozzle assembly.

With regard to feature that "some of the nozzles in each cluster are at different distances from the spray arm with respect to each other", the Examiner improperly relies on Eaton. The Examiner's alleged motivation for relying on Eaton is completely contradictory to the other positions used by the Examiner. For example, for the alleged motivation to rely on Schock, the Examiner argues the need for uniformity. However, the motivation for relying on Eaton is that Eaton allegedly "teaches mixing of different coating substances..." That is not uniformity. Furthermore, where is the need, desire, or even relevance to mix different substances? Accordingly, there is absolutely no motivation to combine Eaton, as proposed by the Examiner.

In view of the above, one skilled in the art would not be motivated to combine Loechl with Schock, Keller, and Eaton so as to arrive at the combination set forth in claim 1 of the present application. Furthermore, the invention of claim 1 solves the

technical problems of obtaining a better control over the spray, as explained in paragraph [0026] of the present application. Nothing in Loechl, Schock, Keller, or Eaton would have incited one of ordinary skill in the art to solve such a technical problem by implementing such features into a conventional gypsum board manufacturing line. Accordingly, claim 1 is clearly patentable over Loechl in view of Schock. Claims 2 and 4-13 depend from claim 1, and are thus also patentable over the applied prior art.

Claim 14 and claim 21 define a spray arm and a method of spraying a coating, respectively, which recites the the clustering of nozzles and the staggering of nozzles within each cluster. Accordingly, the arguments set forth above with respect to claim 1 also apply to the subject matter of claims 14 and 21. In addition, claims 15-20 and 22-24 depend from claims 14 and 21, respectively, and are thus also patentable over the applied prior art.

Independent claim 28 defines a manufacturing line for gypsum boards that includes, among other elements, a plurality of spray nozzles arranged on a spray arm for spraying a coating on gypsum boards on a conveyor, wherein the plurality of nozzles are arranged in clusters and the nozzles in each cluster are staggered so that at least some of the nozzles in each cluster are at different distances from the spray arm with respect to each other. Accordingly, claim 28 is also patentable over the applied prior art at least for the reasons set forth above with respect to claim 1. Claims 25 – 27 and 29 are patentable at least for the reasons set forth above with regard to the independent claims. In addition, each of those claims provides a definition of cluster that is not taught by the applied prior art.

It is also important to note that the Examiner has completely ignored claim 10, which recites that the base frame is mounted on wheels so that the base frame can be moved to a remote location. The Examiner has also completely ignored the substance of claims 15 and 16, which define a controller for spraying the coating only when a board is below the nozzles, and wherein the controller is activated by a timer. Furthermore, applicants note that the Examiner has not considered the dependent claims 25, 26, 27, and 29 that were added in the last response.

In view of the foregoing amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejections of the present application.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: September 28, 2006

By: /WCRoland/  
William C. Rowland  
Registration No. 30888

P.O. Box 1404  
Alexandria, VA 22313-1404  
703 836 6620